

Commonwealth of Kentucky
Division for Air Quality
PERMIT STATEMENT OF BASIS

(For permits requiring public notice)

Title V Final Permit No. V-99-009

WESTVACO CORPORATION, CHEMICAL DIVISION

WICKLIFFE, KENTUCKY

REVIEWING ENGINEER - KUMAR POLE, P.E.

Plant I.D. # 072-0100-0012

Application Log # F728

A. SOURCE DESCRIPTION:

Westvaco Corporation, Chemical Division (hereafter referred to as 'Westvaco') operates an activated carbon manufacturing plant in Wickliffe, Kentucky. The facility has an SIC code of 2819 and produces activated carbon products used in onboard vapor recovery systems and as speciality carbon catalyst. The facility is also permitted to operate a production line for extruded carbon products but this line has not been constructed yet.

The facility is an existing major source for carbon monoxide, nitrogen oxides, particulate matter (PM₁₀), volatile organic compounds (VOCs), and single & combined hazardous air pollutants (HAPs). On February 9, 1996, Westvaco received a permit [F-96-001] to construct and operate a new activated carbon manufacturing facility in Wickliffe, Kentucky. The facility was permitted as a PSD source and was subject to an ambient air quality impact review and BACT analysis. On June 27, 1996, the permit was revised [F-96-001 (Revision 1)] to include changes to the PSD permit.

Although the original permit met Title V requirements, there have been substantial changes to Kentucky's Title V permit format since the date of original issuance. Furthermore, with the current application, Westvaco is requested significant revisions to the existing permit which require public and U.S. EPA review. Therefore, the division has made a decision to re-issue the permit for the entire Westvaco carbon plant in the most current Title V permit format. This permit is being issued as Title V permit superseding the existing plant-wide permit. This permit was subject to all Title V public, affected states, and U.S. EPA review procedures.

B. PUBLIC AND U.S. EPA REVIEW:

On November 18, 1998, the public notice on availability of the draft/proposed permit and supporting material for comments by persons affected by the plant was published in the *Advance Yeoman* in Wickliffe, Kentucky. The public comment period expired 30 days from the date of publication. During this time comments were received from Mr. and Mrs. DeJarnett, residents of Wickliffe. A copy of their comments and the division's response is included as an attachment to this document. No changes to the draft permit were necessary as result of the public comments received.

Concurrently, the draft/proposed permit and all supporting materials were also made available to U.S. EPA, Region IV for review. The 45-day EPA review period also began on November 18, 1998. During this time, no comments were received from U.S. EPA on this permit.

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C. CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.

Attachment: Public Comments and Response

PUBLIC COMMENTS

Location:

The comments were taken from Mr. Billy DeJarnett and his wife in a meeting at Mr. DeJarnett's residence on January 6, 1999 in Wickliffe, Kentucky.

Attendees:

Present at the meeting were Mr. and Mrs. DeJarnett, Pat Haight, Kumar Pole (Kentucky DAQ, Permit Review Branch), and Ken Frye (Supervisor, Paducah Regional Office, Kentucky DAQ).

Summary of Mr. DeJarnett's Comments:

Presented below is a summary of the comments received during this meeting:

a. Odor:

Wind from the south or west always smells. Not only is there an odor but it is accompanied by a burning sensation. There is no problem when the wind is blowing from the north or the east. It usually dissipates quickly but is bad during an inversion. Under certain barometric pressure conditions, the smoke lies down on the ground. He mentioned that the odor problem is considerably worse when noise from the plant is louder. The odor problem has diminished following installation of the Brinks demister unit at the Westvaco plant. He thought the problem had been eliminated but over the last month has recurred and at 4:30 pm today (January 6, 1999), the odor problem was severe.

Westvaco personnel have informed him that they continue to meet the applicable air quality standards. Whenever he experiences an odor episode, Mr. DeJarnett calls the public relations person at the Westvaco plant as instructed. The plant then sends someone over in an hour to his residence by which time the odor problem ceases to exist.

Westvaco has held two public meetings in Wickliffe. During these meetings, they have informed the affected public that they have spent \$4 million in successfully eliminating the perceived problem.

Mr. DeJarnett lost a "Whoosh" frisbee on his roof last summer. When he got onto the roof 2 weeks later to retrieve it, it had disintegrated. In the past, frisbees left on the roof had not been similarly affected. Mr. DeJarnett inquired about the long-term effect of the emissions on his health, the roof, and his clothes.

b. Noise:

Some of the trees between Mr. DeJarnett's residence and the Westvaco plant have been cut down and as a result, the plant is more visible and audible. Personnel from the plant have measured the noise levels at various locations in the vicinity and have indicated that the noise is typically between 4-5 decibels on the road and 50-60 decibels at the plant. Westvaco has supplied Mr. DeJarnett with some neighborhood noise data. The data indicates that from 06/23/98 to 08/04/98,

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the readings varied between 50.7 and 53.3 dB on Mr. DeJarnett's property.

Mr. DeJarnett has personally measured noise levels up to 55-65 dB at his residence, 70 dB at his residence when a bearing was out on an ID fan at the Westvaco plant, and 70 dB very near the plant. Mr. DeJarnett feels that it is unfair that the plant was built accompanied with noise and odors after he had already been living there for a period of time. Mr. DeJarnett indicated that some of his neighbors were also upset but would not say anything because they either worked at the plant or their families did.

Ken Frye explained that no federal or state standards for ambient noise currently exist. The only noise standards are workplace - OSHA - standards that apply only within the plant premises.

c. Compliance:

Mr. DeJarnett asked if they had passed the opacity standards when they conducted the most recent performance tests. Ken Frye indicated that they had but he would check the opacity again. Mr. DeJarnett inquired about the possible appearance of smoke emanating from the plant. Ken Frye explained that the smoke should be colorless following dissipation of the steam in the smoke. Days with high humidity caused the steam to persist and this made visual observations difficult. He indicated that future visual readings would be attempted on days with low humidity.

Mr. DeJarnett reported that when sawdust was loaded in the activation kiln, smoke leaked from the gaskets around the kiln, resulting in "puffing". The gaskets on the activation kiln have been replaced but they continue to puff smoke. The odor problem in his neighborhood often coincides with the kiln "puffing". The ductwork apparently burned up when they first started the plant. Ken Frye indicated that he would pursue the "puffing" problem further since it appeared to be a violation of applicable regulations and the permit.

Mr. DeJarnett asked how often Westvaco would be required to conduct performance tests. The Division explained that Westvaco had already completed the initial performance tests and would be required to conduct another round of tests during the fifth year of the permit term. Ken Frye also explained that the Paducah Regional Office would conduct a yearly inspection of the Westvaco facility. He further explained that the permit contained specific monitoring and recordkeeping requirements that Westvaco was required to comply with. These same parameters were monitored during the initial performance tests and would serve as indicators of the performance of the plant operations. Westvaco is required to maintain records of all required monitoring and these records are to be made available to Regional Office inspection personnel at any time they visit the plant.

d. Permit Process:

Pat Haight described the Title V permitting process and what the subsequent steps following expiration of the EPA comment period would be. She further explained the following points:

- i. The permit contains production rate limits which cannot be exceeded by Westvaco without applying for a permit modification.

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- ii. Any emission increases or changes in the monitoring, reporting, and recordkeeping requirements requested by Westvaco would require another public notice prior to approval by the Division.
- iii. With the exception of CO emissions from the drying kiln, the current permit did not allow emissions of any pollutant from any emission point beyond the levels allowed in the facility's previous permit. The slight increase in CO emissions from the drying kiln meets BACT levels.
- iv. The permit currently public noticed is being issued to allow the plant to install additional control equipment to meeting existing emissions standards.

Kumar Pole explained that the permit currently public noticed was a lot more specific than the previous Westvaco permit and contained substantial monitoring, reporting, and recordkeeping, consistent with Part 70 requirements.

Ken Frye asked Mr. DeJarnett to call the Paducah Regional Office if he observes any visible emissions from Stack A (activation kiln stack).

Summary of Kentucky DAQ's Response to Comments:

a. Odor:

The odor problem is likely caused by emissions of phosphoric acid from the Westvaco facility. The equipment designed to control phosphoric acid emissions from the facility had not performed as originally intended and as a result, Westvaco failed to meet the applicable phosphoric acid standards following startup of the plant. The Division initiated enforcement action that required Westvaco to propose specific measures to meet the applicable air quality standards. Subsequently, Westvaco proposed installation of an additional control device for phosphoric acid - a Brinks demister unit. The current permit under review is being issued to make operation of the demister unit state- and federally-enforceable.

More recent performance tests, conducted following installation of the Brinks demister unit, indicate that the facility is now able to meet all applicable emission standards for all pollutants, including phosphoric acid. Mr. DeJarnett's problems with odor appear to have been greatly alleviated since the installation of Brinks demister unit. Mr. DeJarnett's more recent problems may be the result of the ongoing fugitive emissions compliance problem at the activation kiln ("puffing" episodes). The "puffing" incidents do not represent normal operation of the facility. Since the permit can only address air quality issues rising from normal operations, no changes were made to the draft permit to address the "puffing" issues. However, the permit already contains requirements for Westvaco to report any deviation from normal operating conditions. Any abnormal operating conditions at the facility, once reported, will be evaluated on a case-by-case basis. The Division will continue to monitor the "puffing" situation and the opacity of the visible emissions from the plant through the inspection rather than permitting mechanisms available to the Division.

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b. Noise:

Kentucky currently does not have any noise standards that apply to this facility. No changes were made to the draft permit as a result of comments related to noise.

c. Health Effects:

Phosphoric acid can affect humans as it enters the respiratory system. Breathing the vapor can cause irritation of the nose, throat, and lungs. Higher levels of exposure can cause a build-up of fluid in the lungs. It is a corrosive chemical and contact with the liquid can severely burn the skin and the eyes. Long-term exposure to liquid acid can cause drying and cracking of the skin. Phosphoric acid is not known to cause cancer or known to be a reproductive hazard. Long-term exposure can cause bronchitis with cough and shortness of breath.

The Division feels that the ambient levels of phosphoric acid allowed by this permit are well below the level that will cause health or property effects. Mr. DeJarnett has experienced respiratory ill-effects from phosphoric acid during the period that the facility was in violation of the applicable emission standards. While there is no guarantee that the current permit with its improved monitoring, reporting, and recordkeeping requirements will result in 100% compliance, adherence to the applicable emission standards contained in this permit should not cause any health problems. No further changes were made to the permit as a result of these comments.

d. Compliance Issues:

This permit contains periodic monitoring elements that meet Part 70 requirements. These elements are expected to lead to improved overall compliance since both the facility and the Division can now track and determine compliance with underlying air quality standards far more easily and accurately. The permittee is required to submit semi-annual summary reports of compliance to the Division and annual compliance certifications to the Division and the U.S. EPA. Additionally, as a major Title V source, the facility will be subject to an in-depth inspection at least once per calendar year by the Paducah Regional Office staff. These mechanisms should lead to improved compliance at this facility. No further changes were made to the permit as a result of comments received on compliance issues.